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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,389	08/29/2001	Jeffrey Wayne Eberhard	RD-24939	5687

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH CENTER
PATENT DOCKET RM. 4A59
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EXAMINER

MORAN, TIMOTHY J

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/682,389

Applicant(s)

EBERHARD ET AL.

Examin r

Timothy J. Moran

Art Unit

2878

-- The MAILING DATE of this c mmunication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 22-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 12-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-21 in Paper No. 7 is acknowledged.

Claims 22-50 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Double Patenting

Applicant is advised that should claim 2 be found allowable, claim 18 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-10 and 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2878

Claims 9 and 20 recite the limitation "wherein said lamination layer is selected from a group..." This is unclear and would be better expressed by the term "wherein said lamination material is selected from a group..."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 8, and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kwasnick, U. S. Patent No. 5,463,225. Regarding claim 1, Kwasnick describes a radiation imaging system comprising a scintillator (180, col. 3, lines 7-13), an imager array (120), and a lamination layer (150, comprising 152 and 156) which provides bonding (col. 4, lines 17-24) and optical coupling (col. 4, lines 10-17). The property of being substantially free from voids is implied in the description of layer 150 as a barrier layer.

Regarding claims 2-4 and 18, the barrier layer of Kwasnick is understood to comprise at least 99% of lamination material.

Regarding claims 5 and 19, the barrier layer of Kwasnick is understood to provide moisture protection (col. 4, lines 47-50).

Regarding claim 8, Kwasnick teaches that the scintillator has a columnar structure (col. 5, lines 13-29).

Claims 1-5, 8-9, 11, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Weisfield, U. S. Patent No. 6,348,693. Regarding claim 1, Weisfield describes a radiation imaging system comprising a scintillator (500, col. 3, lines 1-8), an imaging array (200), and a lamination layer (400). The property of being substantially free from voids is implied in the description of layer 400 as a protective layer (col. 3, lines 38-44).

Regarding claims 2-4 and 18, the barrier layer of Weisfield is understood to comprise at least 99% of lamination material.

Regarding claims 5 and 19, the barrier layer of Weisfield is understood to provide moisture protection.

Regarding claim 8, Weisfield teaches that the scintillator has a columnar structure (col. 3, lines 63-65).

Regarding claims 9 and 20, Weisfield teaches the use of benzocyclobutene polymers (col. 3, lines 37-41).

Regarding claim 11, Weisfield teaches the use of a lamination layer thickness of 1.5 to 10 microns (col. 3, lines 49-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwasnick or Weisfield as applied to claim 1 above, and further in view of Kingsley, U. S. Patent No. 5,179,284. Kwasnick and Weisfield do not describe the use of a reflective scintillator surface opposite the imager array. However, Kingsley teaches that such an arrangement (col. 2, lines 55-63) has the advantage of maximizing detector signal (col. 3, line 60-col. 4, line 8). Therefore it would have been obvious to one of ordinary skill in the art to provide such a reflective scintillator surface in the system of Kwasnick or Weisfield for the advantage of maximizing signal.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwasnick or Weisfield as applied to claim 1 above, and further in view of Homme, U. S. Patent No. 6,278,118. Kwasnick and Weisfield do not describe the thickness of the scintillator. However, Homme teaches that a thickness of 600 microns is useful in scintillator-based radiation imagers (col. 5, lines 37-43). Therefore it would have been obvious to one of ordinary skill in the art to use such thickness values in the system of Kwasnick or Weisfield to achieve radiation detection.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwasnick or Weisfield as applied to claim 1 above, and further in view of Cox, U. S. Patent No. 5,220,170. Kwasnick and Weisfield do not teach the use of a fiber optic type scintillator. However, Cox teaches that a fiber optic type scintillator is useful in a scintillator-based imager for the advantage of radiation detection (col. 1, line 66-col. 2, line 2). Therefore, it would have been obvious to one of ordinary skill in the art to use a fiber optic scintillator in the system of Kwasnick or Weisfield for the purpose of radiation detection.

Allowable Subject Matter

Claims 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claims 10 and 21 include limitations that a lamination layer material in a scintillator-based imager consists of plasticized polyetherimide thermoplastic polymers. Claims 12 and 15 include limitations that a lamination layer in a scintillator-based imager comprises an optical absorbing material.

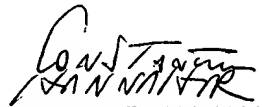
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Moran whose telephone number is 703-305-0849. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

T.M.
TM
July 16, 2003


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878